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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Bernd Fischer

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EXAMINER

DICUS, TAMRA

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/700,099	<b>Applicant(s)</b> FISCHER ET AL.	
	<b>Examiner</b> TAMRA L. DICUS	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4-6,9 and 11-24 is/are pending in the application.
- 4a) Of the above claim(s) 16-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-6,9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

The RCE is acknowledged.

Applicant's arguments filed 07/21/08 have been fully considered but they are not persuasive.

#### *Claim Objections*

a. Claim 4 is objected to because of the following informalities: the language {"chosen from"} is not an acceptable Markush group listing. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being "selected from the group consisting of A, B and C." See *Ex parte Markush*, 1925 C.D. 126 (Comm'r Pat. 1925). Suitable language to include would be {"wherein the X are selected from the group consisting of"}.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6, 9, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thoen et al (US 5910358).

Thoen teaches a floor covering comprising a latex composition including a polyolefin binder mixture of interpolymers including ethylenes and alpha-olefins (6:1-7) where an ethylene/propylene interpolymer (referred also as substantially linear ethylene polymers having melt flows greater than 5, meets Applicant's range greater than 3, 16:40-45) comprises alpha-olefins C3-C20 including 1-octene (12:5-30, 14:3-23, 16:40-68, embraces i) and wherein the latex is dispersed in powder form, with MAH-g-PE (embraces ii)) or LLDPE (8:41-55). A polyolefin composition (of the same aforementioned latex polyolefins include also LLDPE and HDPE-g-MAH-8:40-55) is crosslinked with a dicumyl peroxide (claim 4 and 11) (while not said to be in the latex composition, still has the same polyolefins of (i) and thus is expected to work when said grafted copolymer is added for the reasons set forth by Thoen, such as improved strength, resilience, and when aforesaid crosslinker is added for thermal oxidative crosslinking) for effectuating thermal oxidative crosslinking (10:40-53, 10:64-68-11:5). See 6:1-7 identifying the alpha-olefin ethylenes in the latex composition and see the same alpha-olefin ethylenes in the polyolefin polymer composition at 12:5-30. Theon identifies the substantially linear ethylene having densities of about 0.875 to 0.91 g/cc (falling in Applicant's range as claimed, see 18:40). The latex and polyolefin composition (and mixtures of such polymers, because it is an interpolymer, more than one, including three polymers are implied, also see 17:14-17) is in the composition and the crosslinking takes place after foaming also (9:1-10, 9:25, 10:13-49, 14, 17, 18) and thus, this obvious blended mixture composition of Thoen embraces the polymeric

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binder as claimed because it would have been obvious to blend all the listed ingredients, the polyolefins of different densities, crosslinking the polyolefin with the organic peroxide, and include grafted HDPE in one copolymer to yield predictable results, for reasons set forth above, and thus meets instant claim 1. Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig-saw puzzle." 325 U.S. at 335, 65 USPQ at 301. Though we are fully cognizant of the hindsight bias that often plagues determinations of obviousness, Graham v. John Deere Co., 383 U.S. 1, 36 (1966), we are also mindful that "the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results," KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739 (2007). Motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself. *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness "from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference." *In re Hoeschele*, 406 F.2d 1403, 1406-407, 160 USPQ 809, 811-12 (CCPA 1969). The densities and melt flow indices are inherent properties because the same material is used (instant claim 4, see Applicant's specification page 3, line 1 and overlapping range of melt flow and densities indicated above). Foaming aids

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(processing) are used also (9:6-12). Print layers are employed as well as a unicolor background (homogenous) for a design on the foam polyolefin layers (see 11: 1-68-12:1-6, claim 15) and the composition as contains fillers which pigments are well known as fillers to include for coloring and also claims the latex composition integrated (comprised) with the top layer including the print inherently including pigment (see patented claims 1 and 2). See also Table 7 mixing B, C, and D resins of the aforesaid polymers in weight percentages of 30%-70% by weight, equivalent to weight ratio of claim 5 (4:1 to 3:2 is 80/20% to 60/40%). See also patented claims 1-2, 6, 8-10 and 22. Instant claims 4-6, 11, 13, and 15 are addressed.

Thoen does not teach the weight percentages recited per claims 4 and 9.

However, Thoen teaches fillers such as the MAH-g-HDPE are added for improved resiliency and strength (8:45-55, instant claims 9-10).

Because Thoen does not teach the amounts of the materials employed, it is necessary for the skilled artisan to determine the workable ranges and optimize the effects of the fillers by varying the amounts employed. It is submitted the optimal and/or claimed values of the respective material would have been obvious to the skilled artisan at the time the invention is made since it has long being held that such discovery, such as an optimum value of the respective result effective variable involves only routine skill in the art. In re boesch, 617 F.2d 272,205 USPQ 215(CCPA 1980). The amount of grafting effects resiliency and strength of the composition. The amount of

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copolymers affects the properties of the copolymer, such as density and melt flow (14:1-68, 15, 16, 17, 18).

- Applicant argues that Thoen teaches the grafted polyethylene powder is added to the latex composition. However, see also 8:40-47 implying that said HDPE-g-MAH is for polyolefin substrate layers, and while Theon states the grafted copolymer is added to the latex composition, it still states in that same sentence (8:41) that it's *for* polyolefin substrate layers, which obviously implies its for polyolefin compositions. Especially in light of the fact that both the latex and polyolefin compositions use the exact same alpha-olefins and teach mixtures and blending, one would expect to successfully blend all of the required materials for reasons of record set forth above.
- Applicant argues that the latex composition requires a vinyl aromatic monomer in addition to alpha-olefin, ethylene or substituted ethylene. However, Applicant has broadly claimed the polyolefin binder and does not exclude said vinyl monomer (despite allegations that claim 4 is absent a vinyl monomer, it is not). All arguments to properties (i.e., controlling rheology, elasticity, densities, and melt flows) are obvious to expect as the same materials are provided.
- Applicant's arguments to not teaching optional limitations (i.e. crosslinkers) are not convincing since they aren't required. Language that

suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. See MPEP 2106.

Claims 4-6, 9, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN Thoen et al. in view of Schuppiser (US 4439574), or Pontiff et al. (US 4702868), or in view of Walton et al. (US 5,911,940).

Thoen is relied upon as set forth above.

Regarding claim 4, Thoen does not teach optional co-crosslinking agents as claimed.

Schuppiser teaches the acrylate polyol derivation in an olefin copolymer as a monomer for crosslinking and processing of the polymer. The resultant polymer exhibits good water resistance for floor coverings. See col. 3, and especially lines 15-25, Abstract, and col. 1, lines 1-25.

Pontiff teaches a crosslinked polyolefin teaching Examples of monomers copolymerizable with ethylene and other olefins are vinyl acetate, vinyl chloride, propylene, butene, hexene, acrylic acid and its esters, and methacrylic acid and its esters. The other polymer that can be blended with the ethylene homopolymer or copolymer may be any polymer compatible with it.

Walton teaches polyolefin foam compositions including polyolefins such as alpha-olefin liner polyethylene-co-1-octene blends, HDPE and LLDPE (col. 5) crosslinked with organic peroxide dicumyl peroxide and methacrylates of polyols (methacrylate derived from a polyol) and triallyl cyanurate (isocyanuric acid derivative) at 6:35-65 for effecting the melt index (8:5-50) for use in coatings for foam structures (i.e., like the foam floor of Thoen, 1:1-15, 4:35-68).

It would have been obvious to one having ordinary skill in the art to have modified the flooring of Thoen including the (co-)/crosslinking agents as claimed because 1) Schuppiser teaches the agents are for crosslinking and processing of the polymer resulting in good water resistance for floor coverings (see col. 3, and especially lines 15-25, Abstract, and col. 1, lines 1-25); 2) Pontiff teaches acrylic acid and methacrylic blended with ethylene or its copolymer with any compatible polymer (7:15-68, 8:1-20) wherein the overall composition aids in lower costs (see 3:35-45, col. 7, Abstract); and 3) Walton teaches the same polyolefin ingredients crosslinked with organic peroxide dicumyl peroxide, methacrylates of polyols (methacrylate derived from a polyol), and triallyl cyanurate (isocyanuric acid derivative) for effecting the melt index for use in coatings for foam structures (i.e., like the foam floor of Thoen, 1:1-15, 4:35-68, 6:35-65, 8:5-50).

Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN Thoen et al. in view of Schuppiser, Pontiff, and Walton, in further view of USPN 6,399,689 to Scarlette.

Thoen is relied upon as above.

Regarding claim 14, Thoen does not teach a mixture of filler comprising mineral intergrowths. Further to claim 15, the pigment included in the print of Thoen is on top of the latex binder composition as a layer; however, if claim 15 is intended to mean comprising as in mixed within the binder, the rejection below applies.

Scarlette teaches fillers, pigments, and an alumina ceramic grain composition blended into any floor finishing composition for enhancing abrasion resistance without compromising flexibility, hardness, and adhesion (col. 2, lines 30-45, col. 3, lines 35-41) and specifically uses alumina to enhance physical properties when included with mineral particles and teaches aluminates having a crystal structure in platelet shape (col. 5, lines 25-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the floor covering of Thoen to utilize a filler mixture of platelet-shaped and crystalline mineral intergrowths because Scarlette teaches such an alumina filler enhances physical properties and abrasion resistance without compromising flexibility, hardness, and adhesion (col. 3, lines 35-41 and col. 5, lines 25-

49). Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the floor covering of Thoen with pigments in a design and mineral intergrowth fillers of a homogenous construction since it is known that such a mixture provides decorative color and an effective filler for the flooring to provide for a consistent composition for the flooring as taught above.

- Applicant has not made any arguments to why the (co-)crosslinking agents, or mineral intergrowth mixtures are not obvious over Thoen and supplemental references, and the Examiner maintains the same reasoning for upholding the limitations as obvious (see above).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMRA L. DICUS whose telephone number is (571)272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/  
Supervisory Patent Examiner, Art Unit 1794

Tamra L. Dicus /TLD/  
Examiner  
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August 6, 2008